

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A controller for an electric machine, the controller comprising:

a switch coupled to the electric machine, having a plurality of power inputs, and operable to selectively couple one of the power inputs to the electric machine;

a first voltage input coupled to one of the power inputs of the switch, configured to receive a first voltage, and operable to provide the first voltage to the switch;

an inverter coupled to a second voltage input and a second power input of the switch, and configured to be activated by a second voltage received at the second voltage input, to frequency-regulate the second voltage to generate a frequency-regulated voltage, and to provide the frequency-regulated voltage to the switch;

a module coupled to the first and second voltage inputs to receive the first and second voltages, and configured to generate different signals representing the receipt of the first and second voltages; and

a micro-controller coupled to the module to receive the different signals, and configured to generate a soft control signal based on the different signals and to selectively control the coupling of one of the first voltage and the frequency regulated voltage to the motor with the soft control signal applied to the switch.

2. (Previously Presented) The controller of claim 1, further comprising a feedback monitor configured to monitor the frequency-regulated voltage, and to accordingly configure the inverter to regulate an inverter output.

3. (Previously Presented) The controller of claim 1, further comprising a relay configured to relay an alternating current ("AC") source as the first voltage, and to generate the second voltage using the AC source.

4-6. (Cancelled)

7. (Currently amended) ~~A controller for an electric machine,~~ The controller of claim 1, and wherein comprising:

~~a switch coupled to the electric machine, having a plurality of power inputs, and operable to selectively couple one of the power inputs to the electric machine;~~

~~a first voltage input coupled to one of the power inputs of the switch, configured to receive a first voltage, and operable to provide the first voltage to the switch;~~

~~an inverter coupled to a second voltage input and a second power input of the switch, and configured to be activated by a second voltage received at the second voltage input, to frequency-regulate the second voltage to generate a frequency-regulated voltage, and to provide the frequency-regulated voltage to the switch;~~

~~a micro-controller configured to receive the first and the second voltages, to generate a soft control signal, and to selectively couple the first voltage and the frequency-regulated voltage to the motor with the soft control signal applied to the switch; and~~

the module includes a summing module coupled to the micro-controller, and configured to generate the different signals to represent the first voltage and the second voltage.

8. (Original) The controller of claim 1, further comprising a rectifying module coupled to the inverter module, and configured to provide power to the inverter module.

9. (Cancelled)

10. (Original) The controller of claim 1, and wherein the first voltage indicates a high speed excitation, and the second voltage indicates a low speed excitation.

11. (Original) The controller of claim 1, and wherein the electric machine comprises a multiple-tapped motor, and the first voltage represents one of a plurality of motor speed at one operating frequency.

12. (Original) The controller of claim 11, and wherein the one operating frequency is 60 Hz.

13. (Original) The controller of claim 1, and wherein the electric machine comprises a single speed motor, and the first voltage represents a motor speed at one operating frequency.

14. (Original) The controller of claim 13, and wherein the one operating frequency is 60 Hz.

15. (Currently amended) A controller for an electric machine, the controller comprising:

a voltage input configured to receive a first voltage;

a relay module coupled to the voltage input, and configured to relay the first voltage and to generate a second voltage;

an inverter coupled to the relay module, and configured to be activated by the second voltage, and to generate a frequency-regulated voltage;

a module coupled to the relay module to receive the first voltage and the second voltage, and configured to generate different signals representing the first voltage and the second voltage;

a micro-controller coupled to the first and the second voltages coupled to the module to receive the different signals, and configured to generate a soft control signal based on the different signals;

a second relay coupled to the micro-controller, and configured to select an electric machine operating voltage from the first voltage and the frequency regulated voltage using the soft control signal signal; and

~~a module coupled to the micro-controller, and configured to generate different signals to represent the first voltage and the second voltage.~~

16. (Previously Presented) The controller of claim 15, further comprising a feed monitor configured to monitor the frequency-regulated voltage and to accordingly configure the inverter to regulate an inverter output.

17-19. (Cancelled).

20. (Previously Presented) The controller of claim 15, further comprising a rectifying module coupled to the inverter, and configured to provide power to the inverter.

21. (Original) The controller of claim 15, and wherein the first voltage indicates a high speed excitation, and the second voltage indicates a low speed excitation.

22. (Previously Presented) The controller of claim 15, and wherein the electric machine comprises a multiple-tapped motor, and the first voltage represents one of a plurality of motor speed voltages at one operating frequency.

23. (Previously Presented) The controller of claim 15, and wherein the one operating frequency is 60Hz.

24. (Previously Presented) The controller of claim 15, and wherein the electric machine comprises a single speed motor, and the first voltage represents a motor speed at one operating frequency.

25-38. (Cancelled).

39. (Currently Amended) A controller for an electric machine, the controller comprising:

an inverter coupled to a first voltage input, the inverter configured to receive a first voltage, to be activated by the first a first voltage received at a first voltage input, and to frequency-regulate the first voltage to generate a frequency-regulated voltage; and

a switch coupled to the ~~inverter~~, inverter and a second voltage input, the switch configured to receive the frequency-regulated voltage and ~~[[a]]~~ the second voltage received at the second voltage input, and to selectively apply one of the received voltages to the electric machine;

a module coupled to the first and second voltage inputs, the module configured to receive the first and second voltages and to generate different signals to represent the receipt of the first and second voltages; and

a micro-controller coupled to the module to receive the different signals, and configured to generate a soft control signal based on the different signals and to selectively control the coupling of one of the second voltage and the frequency regulated voltage to the motor with the soft control signal applied to the switch.

40. (Previously presented) The controller of claim 39, further comprising a feedback monitor configured to monitor the frequency-regulated voltage, and to accordingly configure the inverter to regulate an inverter output.

41. (Original) The controller of claim 39, further comprising a relay configured to relay an alternating current ("AC") source as the second voltage input, and to generate the first voltage using the AC source.

42-44. (Cancelled)

45. (Currently amended) ~~A controller for an electric machine,~~ The controller of claim 39, and wherein comprising:

~~an inverter configured to receive a first voltage, to be activated by the first voltage, to frequency-regulate the first voltage to generate a frequency-regulated voltage;~~

~~a switch coupled to the inverter, configured to receive the frequency-regulated voltage and a second voltage, and to selectively apply one of the received voltages to the electric machine;~~

~~a micro-controller configured to receive the first and the second voltages, to generate a soft control signal, and to selectively couple the second voltage and the frequency regulated voltage to the motor with the soft control signal applied to the switch; and~~

the module includes a summing module coupled to the micro-controller, and configured to generate the different signals to represent the first voltage and the second voltage.

46. (Original) The controller of claim 39, further comprising a rectifying module coupled to the inverter module, and configured to provide power to the inverter module.

47. (Cancelled)

48. (Original) The controller of claim 39, and wherein the first voltage indicates a high speed excitation, and the first voltage indicates a low speed excitation.

49. (Original) The controller of claim 39, and wherein the electric machine comprises a multiple-tapped motor, and the first voltage represents one of a plurality of motor speed at one operating frequency.

50. (Original) The controller of claim 49, and wherein the one operating frequency is 60 Hz.

51. (Original) The controller of claim 39, and wherein the electric machine comprises a single speed motor, and the first voltage represents a motor speed at one operating frequency.

52. (Original) The controller of claim 51, and wherein the one operating frequency is 60 Hz.

53-58. (Cancelled).